



Naval Surface Warfare Center Dahlgren Division

Warfare Systems Development and Integration

Mr. Dale Sisson, SES

Technical Director

Naval Surface Warfare Center, Dahlgren Division

WELCOME

Navy League of the United States Sea-Air-Space Exposition

April 5, 2022

The Leader in Warfare Systems Development and Integration



NAVAL SURFACE WARFARE CENTER
DAHLGREN DIVISION
DAHLGREN | DAM NECK



NSWC Dahlgren: A Legacy of Evolution & Revolution

1918

1940

1950

1960

1970

1980

1990

2000+

Networks

- Connected systems

Systems Engineering

- Combat Systems
- New Warfare Concepts
- Ballistic Missile Defense
- Integrated Warfare Systems

Computational Sciences

- Targeting
- Strategic Fire Control Computation
- Digital Fire Control

Research & Development

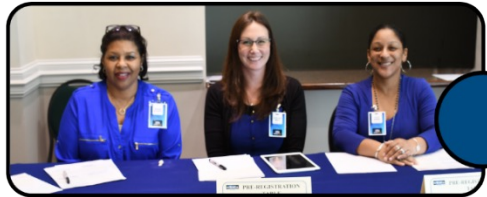
- Math, Physics, Chemistry, Engineering

Test & Evaluation

- Testing, proofing naval guns and ordnance

TODAY and the Future

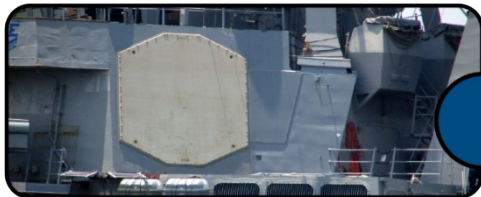
- Combining the digital with the real world
- Electric Weapons
 - Multi-use (Sense, ID, Engage)
 - Scalable effects
 - Lower cost
- Advanced materials
 - Topside Design
 - Control of RF environment
- Distributed Networked Systems
- Integration of Unmanned and Autonomous Systems
- Advanced Sensors



Comptroller, Contracts, Corporate Operations



Strategic & Computing Systems



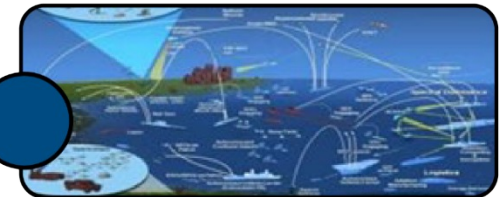
Electromagnetic & Sensor Systems



Integrated Engagement Systems



Weapons Control & Integration



Warfare Analysis & Digital Modeling



Readiness & Training Systems



Integrated Combat Systems

MISSION VISION

We deliver warfare systems to protect our nation and defeat our adversaries.

Design, develop, and integrate technologically superior, 21st century warfare systems.

STRATEGIC GOAL 1

Technical Thrusts

Naval Surface Warfare Center Dahlgren Division (NSWCDD) has a broad and diverse research, development, test and evaluation (RDT&E) portfolio, with an emphasis on warfare systems development and integration. As we look at the next five years and beyond to develop future technologies for the Surface Navy and, in the process, strengthen ourselves, our technical priorities will include these five specific technical thrusts:



THRUST 1

Intelligent Automation



THRUST 2

Software Engineering Revolution



THRUST 3

Digital Engineering



THRUST 4

Hypersonic Weapons Advancement



THRUST 5

Information Superiority

Get Real, Get Better!

STRATEGIC GOAL 2

Information Technology (IT) Modernization

Deliver transformational information technology solutions that will increase innovation and collaboration and speed delivery of capability to fleet.

STRATEGIC GOAL 3

Workforce Development

Build the future workforce that maintains mission readiness of the future Navy through strategic planning, hiring, and development.

STRATEGIC GOAL 4

Communication

Communicate the right information to the right people at the right time.

STRATEGIC GOAL 5

Business

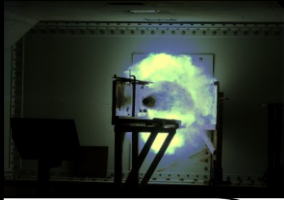
Provide effective, efficient, and modern business solutions.

The Leader in Warfare Systems Development & Integration

Dahlgren Proving Ground



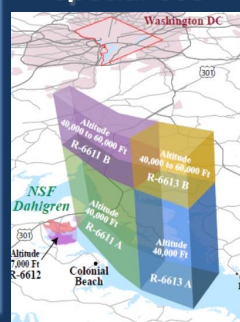
- **Over-Water Gun and Weapon System T&E**
 - Conventional Guns
 - Directed Energy (DE) Weapons
 - Radars/Sensors
- **Ammunition Services**
- **Insensitive Munitions**
- **Basic Safety Series Testing**
- **Performance Characterization**
- **Environmental Suitability and Survivability**



Potomac River Test Range Complex



Special Use



Infrastructure/Equipment

169 square miles of controlled river

18 Range Stations/
3 w/ Fiber Connection
(RS7/RS9/RS21)

13 Piers/
2 Boat Ramps

15 nautical mile
line of fire

3 Furuno Surface
Search Radars
(B997/RS9/21)

10 Range Boats/
20+ Support Boats

Range Operations
Center (ROC)

Main, Terminal, and AA
Fuze Range
Gun Line/Mounts

50+ Magazines/
Explosives Operating
Buildings

Restricted Airspace –
up to 60,000 ft

UAV Runway in
Restricted Airspace

LSTAR Airspace
Surveillance Radar

200 + Buildings /
Structures / Facilities

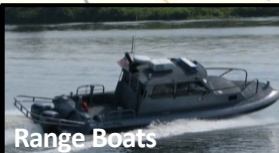
Radar Integration
Test Site (RITS)

High Energy Laser (HEL)
Test Pads

USS Dahlgren
Distributed Network

CEC Tower

3300 + Inventoried
Items in Range
Instrumentation



Achieving 'Integration of the Physical and the Digital'



Thank You

